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Education of the child, including preschool education, has been and still is a topic of great concern to many people. Translation of this concern into constructive programs for early childhood education is a profound problem, one that is debated often and emotionally. There is a dichotomy between those who favor educational practices based on concepts of the child in terms of his whole emotional-cognitive development and those who favor a narrower approach aimed specifically at developing certain skills measurable by intelligence tests. Evangeline Burgess and the Pacific Oaks College and Children's School fall close to the former class; the Bereiter-Engelmann program, close to the latter. There are also debates on the merit of Piaget's ideas on the relationship of early experience and cognitive development. There is concern for the need to understand the quality and quantity of stimulation most beneficial to intellectual development. This includes the debate over the value of such projects as Head Start and the importance of employing teachers who can do the job intended by the educational program involved. Often neglected by educational program planners is the clear definition of their educational goals--whether they would or should emphasize intelligence and narrow skills or intellect and understanding. (WD)

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PACIFIC OAKS COLLEGE AND CHILDREN'S SCHOOL

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The First

EVANGELINE BURGESS MEMORIAL LECTURE

THE SPIRIT OF THE TIMES IN CHILDHOOD EDUCATION

by

Milton J. E. Senn, M.D.

Presented in cooperation with the
California Institute of Technology,
Beckman Auditorium, April 3, 1968

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DR. MILTON J. E. SENN, a friend of the late Evangeline Burgess and outstanding child specialist, has been a pioneer in modifying pediatric education and practice to include the psychological and social aspects.

As administrator at Cornell in the thirties, he used concepts from child development, education and the social sciences in a comprehensive training program for medical students to enlarge the physician's concept of the child through growth dynamics. At New York Hospital-Cornell Medical Center, he established a nursery school with the Department of Pediatrics, for the observation of the preschool child by pediatricians in training, and initiated an occupational-educational-recreational service for inpatients that has served as model for similar service units in children's hospitals.

Dr. Senn organized the Yale Child Study Center in 1948, and served as director until his retirement in 1966. Programs at the New Haven center include teaching and research on personality development; a nursery school; a child psychiatry unit and a diagnostic unit for developmental problems of infants and preschool children.

Among the many publications by Dr. Senn about his work, are two new books in press: Psychologic Problems in Child Behavior and Development, (Lea and Febiger); The Firstborn: Experiences of Eight American Families, (Harvard University Press).

THE SPIRIT OF THE TIMES IN THE EDUCATION OF YOUNG CHILDREN

Milton J.E. Senn, M.D.

Interest and concern about education have been with us always. As we read the letters, journals, sermons, tracts and books written from the earliest days of our country we are impressed by the sincerity and deep feelings of all sorts of people about the need to change educational practices of children. The remedies suggested are numerous and range from the theological to the secular, from the idealistic to the practical.

But the very fact of the persistence of dissatisfaction suggests that neither the appropriate means have been found nor the appropriate measures applied. The facts are that we continue to have numberless children poorly educated, even uneducated, overcrowded classrooms, and a shortage of teachers, many of whom are poorly trained and most of whom are underesteemed professionally and badly underpaid.

This is not the time to relate the interesting history of early childhood education in America, although I am tempted because one learns much from historical reviews. Instead, I shall talk about the spirit of our times.

In addressing myself to this topic I am drawn to Goethe's observation in Faust that what we have named the spirit of the times is but the spirit of the man in which the times are mirrored. It is fitting,therefore, that I begin with one who was a leader in early childhood education and who so well mirrored her times -- Evangeline Burgess.

In 1961 I spent several days at Pacific Oaks College as a resource lecturer at a workshop on the changing American family. There was concern in the minds of the faculty and students about changes in family life which seemed to influence the behavior and learning of young children. Many questions were raised about their education and the roles of the school and teachers in helping children cope with stresses which seemed so numerous already in the life of the young child.

Already, in 1961, there was a distinct cleavage between those educators who fostered educational practices based on concepts of the child in terms of his <u>whole</u> emotional-cognitive development and those who favored a narrower educational approach aimed specificially at developing certain skills which could be measured as intelligence. This cleavage has become more sharp and clear-cut today in 1968.

As I learned from talking to Evangeline Burgess, there were many questions in her mind also about educational practice. But her perspectives on education were clearly evident in her plans for this college and in her manner of dealing with children. As I came to know her, I saw those personal qualities which made it inevitable that she be concerned with the feelings and emotional well-being of children.

She was compassionate; she was sympathetic; and above all she had empathy with those struggling to grow, to learn and to cope with stress in the classroom and in the family. When Evangeline Burgess walked through the playground of her school she found it as natural to embrace a child in distress as to be concerned about his learning. For her there was no cleavage between the necessary psycho-social nurture of the child and the necessary excellence of curriculum and methods of stimulating intelligence through the active teaching role.

Her dissatisfactions with what was known about these matters, and her drive for greater clarity, are attested to by her support of a research program for the college. While she valued development of techniques which increase proficiency in speech, numbers and learning, she did not view them as the sole means for fostering intellectual ability, nor the whole instruments with which to help growing children cope with life and its problems.

When we last talked together in 1961, there were already many persons who thought there was nothing wrong with the American school system which could not be corrected by the use of mechanical devices. The electric talking-typewriter and teaching machines modeled after Skinner's were examples of such hardware that were tempting to educators facing a shortage of teachers and over-crowded classes. Manufacturers of electric gadgets were attracted to the possibility of assisting in the solution of these problems, particularly when large monetary profits would also result. Evangeline Burgess was not averse to the use of new techniques for teaching, but she had strong and clear feelings about the primary role of the teacher, the <u>human</u> instrument if you will, in helping children develop their intelligence and acquire social values.

It is a sign of our disquieting times that Evangeline Burgess' sane perspectives on the hierarchy of values have been turned on end. We are now urged to believe that highly structured, more or less mechanical and rigid practices in teaching are superior to those which are flexible and child experience-oriented and which stress human relationships. We are being led to expect immediate as well as lasting results from programs aimed at speeding up the learning of the youngest minds, who will then inevitably grow into adults of great intellectual accomplishment and fulfillment. Emphasis on the intelligence quotient as the measure of achievement continues undiminished, despite strong evidence which questions the validity of that practice.

Whence come these movements in education? Obviously the changing nature of societies, others as well as our own, forces us to redefine how we shall educate a new generation. Like John Dewey in the 1890's, we must state our pedagogic creeds. Today in American we formulate these in terms of our changing views on human development in the context of our understanding of the changing nature of our society. Historically, a landmark of the increasing concern and dissatisfaction with our educational practices in the middle of this century was provided by Sputnik. This triggered a near phobia that American minds must be equal, if not superior, to our cold war competitors.

Since then the preoccupation with learning and attainment of certain skills has been exacerbated by the real dangers of nuclear war, agression, defense and survival. More recently the Civil Rights movement has moved us as never before to take stock of our human resources, and we have begun to view the affluent, as well as the millions of our poor and our deprived, as a waste of such resources. In our alarm we have become committed to salvaging human resources. Now there is readiness to accept and even act upon the old and long-held premise of those in the field of infant and child development, that the beginnings of waste start in those early years. The Sputnik-induced research proliferation in physics, technology, chemistry, space, has spread to pediatrics, psychology and education. Sharing in the research explosion, and now receiving much attention and concentration, are the areas of infancy, preschool and early childhood development and education.

It is worth noting that we have had few great philosophers of education or educational theorists in America to lead the way. We have had our Henry Adamses with descriptions of their education, but such autobiographies often dealt more with highly individualistic experiences than with those broadly applicable to masses of people. We have had critics of American education from D'Toqueville in 1838 to the present, through such distinghished men of letters as Robert M. Hutchins, James B. Conant, John W. Gardner, and others. G.Stanley Hall, John Dewey and possibly William James stand alone as great theorists of human behavior and education. For the most part we have always looked to others in foreign countries for basic theories about the nature of man, his attributes and his needs, and concepts of how these are to be dealt with educationally. Even now we refer, as did Hall and Dewey, to the writings of those who held romantic views on the nature of the child--Jean Jacques Rousseau, John Locke, Henry Pestalozzi, Froebel, and that deeply religious physician-educator, Madame Montessori.

Sigmund Freud must be added to this list, not primarily as an educator or a philosopher, but as a medical clinician whose studies

on human behavior produced theories which appropriately and inappropriately have been applied to education for at least 50 years. To the list of European geniuses and great thinkers we have recently added the contemporary Swiss naturalist and genetic epistemologist, Jean Piaget, because of his profound influence on American psychologists and researchers in child development in the past decade.

What distinguishes the past 10 years in our country from all others is the rising influence of the experimental psychologist and his studies of animal and human behavior on theories of learning, teaching and education. Since the last century, educators have been told to make child study the center of their programs. G.Stanley Hall originated the child study movement. Simultaneously, because of the rise of physical, biological and social sciences, psychologists, particularly Binet and Terman, developed tests, especially of intelligence and aptitude. This development showed our will to rely on science and research for guidelines in educating and rearing children in the early years of this century. But despite Hall's optimisms about educational research linked to child study, and the belief of Dewey that such a union would promote self-realization of every child and automatically work towards the fulfillment of our democratic society, their ideas were not widely accepted. The new education--the progressive educational movement--was short lived. The child study and development movement grew slowly and haltingly until quite recently. We have never had such an abundance of research in child development related to learning, as we have had since Piaget's experiments were recognized in the early 1950's and seemed to have implications for psychology and education.

Piaget and Research in Cognitive Development

Piaget and his colleagues in Geneva are primarily recognized for the work they have done in the field of cognition, although Piaget has been mostly concerned with the nature of knowledge and with the structures and processes by which it is acquired; in other words, epistemology. His discoveries of the vital and long-lasting influence of experiences in the first five years of life, that infantile sensory-motor coordinations are forerunners of the form and content of adult thought, substantiate the theories of Freud. (It is a curious social and historical fact, however, that while Piaget's concepts of the importance of the early years of life recently have been widely accepted in psychological circles, those of Freud have increasingly fallen into disfavor among social scientists.) Piaget is informed about Freudian theories, and has long realized the importance of emotional processes in learning. However, he has said that time limited his considerations to study of intellectual development, and that he would leave to others the consideration of feeling states and their relationship to learning. Few of his disciples in the field of experimental psychology have been more inclined to integrate their

research on cognition with that on personality development, in their formulation of learning-teaching paradigms. Any such attempt at blending has come more from educators identified with psychoanalytic and psychiatric theories and practice. In the East, the most representative of such educators is Professor Barbara Biber, whose home base, the Bank Street College of Education in New York City, bears many resemblances to Pacific Oaks College.

Piaget views the growth of human intelligence (or probably more accurately the structures of knowing) as proceeding over time, beginning in early infancy and ending in adolescence. Not only is there a distinct beginning and ending, in his schematic presentation, but there are certain critical periods interspersed along the way. Human intelligence (or human knowing) begins with the phase of sensory-motor responsiveness. The infant is equipped by heredity and constitution with reflex patterns for reacting to touch, vision, sound and kinesthesis; his behavior is shaped by external demands imposed by the environment. Response to these demands goads him into further growth.

As he accommodates to and assimilates his experiences, the baby learns strategies for coping with both external and internal demands, and with time he organizes the information he has acquired into systems. By one year the child is able to construct a theory of the world that transcends direct sensory experience, as when he appreciates the existence of an object he cannot see, and when he develops skill in searching for the unseen. By the time he develops language, which is dependent on his sensory-motor functions, he is more manipulable in thought and more susceptible to social correction. We say he is able to internalize his actions, to use his mind rather than only to act overtly, to proceed from perception and manipulation to reflection.

The phases or emphases of intellectual development follow each other, not in strictly chronological fashion, but in a sequential and orderly manner from early infancy into early adolescence. Piaget believes that while one may accelerate these phases to some extent by manipulating the environment, there is not much to be gained by doing it beyond a certain point. However, the greater variety of experiences a child copes with, the greater becomes his ability to cope. The environment is important; even the simplest influence and stimulation is acted upon, but only as a child is able to pay attention to it, and this ability depends on the degree of assimilation which has gone on before.

Piaget disclaims being an educator, or even a psychologist, and never points to practical implications of his work, yet he is aware of what some of his followers are doing in the application of his studies in education of young children. He is unhappy about some of

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the misinterpretations of his work. His warning is wise and timely as he inquires, "What is learning for--to know a certain number of things, or to be capable of creating, or inventing new things?" In other words, is the purpose of education the stimulation of intelligence, or the fostering of the intellect? Like a few others, Piaget seems to view a great part of modern educatuon as being anti-intellectual through its concentration on the intelligence at the expense of the intellect.

After more than a decade of non-recognition and adverse criticism by psychologists around the world, Piaget's theories attracted the interest of a few Americans, particularly social scientists at Harvard, Brown, Clark, and Yale Universities. One of the strongest advocates, and the best known, is Professor Jerome S. Brunner of Harvard, who began a collaborative research project with Piaget's group in Geneva. A group of psychologists designated as "cognitive psychologists" soon started research which was aimed at verifying some of Piaget's hypotheses and clarifying them. Interest in cognition has spread across this country, and has attracted educators as well as psychologists, who are attempting to modify programs of teaching according to Piaget's principles of learning. However, there continues to be much unclarity in the minds of many of Piaget's adherents about the meaning of the term cognition. Piaget himself continues to change his emphasis, concepts and terminology. He says his theories are unfinished; yesterday's concepts may be untenable today. Then too, understanding him requires knowledge of biology, physics, logic and philosophy. Few persons command such a knowledge. Furthermore, Piaget writes in a style which discourages comprehension; translations tend to distort.

Professor Bruner has published a book of essays based on research at his Center for Cognitive Studies at Harvard. The reviewers of the research of Bruner and others as described in this book are critical of the ambiguity in their presentations. Piaget, to whom the book is dedicated, goes farther than the American critics when he states that he regards Bruner's experimental approach as superficial and "filled with lacunae due to the absence of checks." He feels that Bruner's experiments need to be repeated with greater care, as is being done in Geneva with the discovery that their research gives different results. Piaget closes his highly critical review with words of caution which might be applied to educators when he says, "Even great psychologists, just like children, need time to develop and to reach the right ideas."

The cognitive psychologists, despite differences of opinion in many things, do find common interest in the behavior of infants and young children, sensing the importance of early experience for later learning. The tie that binds them is interest in the early years of

life. Application of their research in providing a stimulating environment for infants and preschool children for the purpose of fostering their intellectual development is now popularly called "education from the cradle to the classroom." It may be interesting here to remind ourselves that these concepts were essential components of John Dewey's philosophy of progressive education. In an essay, Interest and Effort in Education, in 1913, Dewey said: "There is a genuinely intellectual factor when the child learns that one kind of eye activity means a certain kind of moving of the arm, clasping of the fingers, etc., and that this entails a certain kind of exploring with the fingers. In such cases there is not simply an acquisition of new physical activity; there is also learning in the mental sense. The rapidity of mental development in the first year and one-half of infancy, the wholehearted intentness and absorption of the growing baby in his activities, the joy that accompanies this increase of ability to control his movements--all these are object lessons, writ large, as to the intellectual significance of actions that (physically judged) are physical."

Cognitive psychologists interested in infant behavior and learning have found encouragement in the research of other scientists studying babies reared in different environments. Concurrent with Piaget's research on his own normal children and on others, a number of American researchers, notably Spitz, were stimulated by Freud's theories and studied infants in institutions. They reported harmful effects of impersonal care and understimulation suffered by babies reared in foundling hospitals. Although the emphasis in this research was first more on affect deprivation, later investigators reported on the damage to cognitive functions as well.

Does Early Stimulation Increase Intellectual Development?

Studies on institutionalized children attracted the interest of researchers in a number of child development centers, so that for the past several years there has been a burgeoning of investigation of the physiological as well as the psycho-social and intellectual deficiencies resulting from understimulation, and on efforts at preventing and ameliorating deficiencies by sensory stimulation. Studies of sense organ stimulation of newborn infants have had special appeal. Very often this research resembled experiments which had been conducted in Russia for over a decade a such institutions as the Institute on Defectology in Moscow under Professor A.S. Louria, and in Leningrad under the Pavlovian-trained pediatrician Krasnagorski. The Americans, like the Russians, found that a baby not only changes his physiological responses reflexly after sensory stimulation, but that he learns to change his behavior if he feels rewarded in the process. For example, newborn babies learn how to change their rate of sucking, how to move a mobile with their toes when pleasurably stimulated by sight and sound.

The inference from this research is that babies can learn more than we realize if they are taught by techniques which stimulate the nervous system. The Russians believed that they could overcome very early the ill effects of prematurity in infants by conditioning experiments. Their results have never been validated elsewhere, but many American cognitive psychologist today believe that by early stimulation of the central nervous system of normal babies, they may speed up intellectual development of children so that by four years of age they will have exceeded greatly the amount usually acquired by that time. Since it is commonly believed that by four years an individual has attained one-half of his final intellectual capacity, the race seems to be on, not only to have American children attain full intellectual performance before adolescence, but to keep it increasing to a higher degree than is normally attained.

The spirit of the times then, as witnessed in the research of American cognitive psychologists, is their belief that future generations of Americans can become more intelligent if we will to accomplish this. There are many who believe that future generations of human beings can gain an average of 30 I.Q. points through better management of their early environment, beginning in infancy. Yet while this emphasis on intellectual excellence continues, there remains an unclarity of definition of intelligence. (More of this later). The details of <u>how</u> to manipulate the environment, and <u>when</u> to do it, are not agreed upon by social scientists.

In reviews of the research of scientists stimulating infants, one rarely finds words of warning, or descriptions of harmful effects of such early stimulation. The research of Professor Burton L. White of Harvard points in that direction. Studying institutionalized infants, he found what Spitz and others had described: delays in motor response due to lack of visual stimulation. In attempts to prevent these deficiencies as early as possible, White studied a group of normal babies in a hospital who were 6 days old. He gave them more physical handling by a nurse, more opportunity to look around and more bright objects to see. He found that his attempts to meet their needs by special handling upset them; they cried a lot and paid less attention to their surroundings. However, when similar ministrations were provided to babies 2½ months old, favorable response did result; these babies smiled at objects, vocalized and seemed happier than controls who were unstimulated. This experiment showed that timing and amount of external stimulation were important. As Piaget summarizes it: "Maturation of the central nervous system opens up possibilities; the environment hinders or helps actualize these possibilities."

The Russians claim that although the immature newborn may rapidly be helped to become mature by conditioning, all do not respond favorably to such treatment. The lack of response comes about because there is

a basic difference in equipment in each individual, which makes timing of the conditioning important. As one would surmise, the more mature responded more favorably than the more immature. But the Russians feel that they have been so successful in hastening maturity, that all normal newborns while in the nurseries are stimulated visually and aurally; "teachers" sing to them at prescribed times each day, dangle colored rings before their eyes, and shake a tambourine next to their ears.

Dr. John L. Fuller, senior staff scientist at the Jackson Laboratory in Bar Harbor, also substantiated the belief that timing and quality of stimulation are important. In research on the effects of experiential deprivation in dogs, he discovered that animals isolated and deprived could be helped to overcome their deficits only if the changes in their environment were made gradually, and in a manner which permitted the sensory-motor capacities to adapt slowly. When the transition from the bad depriving to the good stimulating environment was made too rapidly, the adaptive mechanisms were overstrained and the dogs became especially fearful. Fuller described another important ingredient for appropriate stimulation when he discovered that only when the stress was reduced by stroking and handling by the research person were the animals able to make more intense contact with other objects, toys as well as humans, and only then without irrational fear. These observations verify the belief of all successful teachers that contact with humans is a more important stimulus than stimulation by impersonal objects, and that human relationships are the primary factors in helping animals, or children to learn.

Other psychologists working with children and observing how they learn also have evidence which agrees with that of Dr. Fuller. They have found that children who have been deprived and who are abruptly and prematurely exposed to new stimulating experiences do not learn readily, because they are overstimulated, excited and have even less impulse control than usual.

Another researcher on human babies speaks to the question of appropriate quality of stimulation when he describes his longitudinal studies on infants from four months to four years of age. Measuring how much they perceive and understand of their environment, Professor Jerome Kagan of Harvard observed differences within the first years of life among babies of parents of different social class. The distinctiveness of the stimulation, more than the amount of stimulation, marked the difference between the middle and lower-class children. Kagan concluded that learning should be fostered in infancy through distinctive (not yet clearly defined) stimulation provided by parents, and that all parents need education about this process, to do it most appropriately for their children. He also believes that the environ-

ment for children in the classroom needs to be provided with a specificity depending on the child's needs, (a concept also held by Hall, Dewey and "progressive educators") and that these needs vary with his early rearing. It may be concluded that inappropriate stimulation, such as overstimulation, of children may be as disastrous as understimulation.

Preschool Education for Deprived Children

I said earlier that social change fostered changes in educational theory and practice. This has been demonstrated very clearly in the establishment of preschool programs for socially deprived children. Kagan's research on children living in the slums was generated from the same awareness which educators long have held of the great difference in learning between ghetto children and those reared in more affluent circumstances. It was that awareness, along with concern with the school dropout problem, that led to the founding of the Head Start program.

Although this was part of the federal effort at combating poverty, it was seen by many educators as an important beginning in changing early childhood education. It was conceived of a prekindergarten schooling which might overcome learning handicaps before children were admitted to the primary school. Unfortunately it started as a crash program without sufficient time to recruit experienced and well-trained teachers. Few of the teachers had the kind of training provided students at Pacific Oaks College. Many of those who accepted teaching and administrative roles received only short periods of training before they began to work. They did not know the characteristics of children aged 3 to 5 years, white or black, middle-class or economically poor. They were equally unfamiliar with information which could help them fashion appropriate learning opportunities, and they were unprepared for the upsurge of their own feelings in dealing with the kinds of children brought to them. For such reasons, many of the Head Start classes have failed to give the children enough of the experiences needed most. It has been concluded by knowledgeable educators that too many children in the Head Start program have not been helped educationally; they have not learned language skills, nor other rudiments which would facilitate a progression of learning in the primary school.

This is not to say that there have been no gains from Head Start. Although the greatest gain seems to be the early recognition of disease and the correction of physical defects in children who otherwise would have been denied any medical care, there are such educational benefits as result when children became better informed about themselves, their persons, their identity, their neighborhoods and the world around them. But even those critics who were fair in their adverse criticisms agreed with those who had never accepted the modern nursery school as an educational resource when they declared that the

Head Start program has been too permissive, too unstructured, and too unstimulating in its educational program. Even some of the unschooled ghetto-reared parents were critical of those teachers who showed their inexperience by encouraging too much free play, who gave little individual attention, and who rarely tried to do something about the children's speech. Too frequently there has been little attempt to teach children what they were ready for, especially a better use of language for communication.

In some parts of the country, notably the South, attempts to give the children and their parents even meager opportunities for contacts with teachers were seriously interfered with, as when the program became a pawn in the Civil Rights struggle. There was fear on the part of many white people, especially politicians, that in teaching children to read and write, and to ask questions, they might become restless and too demanding of their rights. In the more sophisticated Northern urban communities, Head Start became a pawn in the struggle between specialists in early childhood education and the newer advocates of cognitive learning.

Some of the critics of Head Start who rejected the standard, play-oriented nursery school approach have recommended more structured and more didactic methods of teaching, not only for that program but for all early childhood education. The program which has received the greatest publicity in this regard, has been that originated by Engelmann and Bereiter at the University of Illinois. These relatively inexperienced teachers of young children were obsessed with the need to teach children certain special items which they feel every child must know when he enters first grade. They developed a program of teaching with three additional characteristics: (1) a high ratio of teacher to student, (2) reliance on drill, and (3) learning by rote. Children are made to repeat after the teacher the names of objects, numbers, and descriptions of various items held in front of them. No deviation of response is permitted; there is always only one right answer. Children in the Engelmann-Bereiter classes are asked to chant answers in unison, as well as to repeat them individually. The words, phrases, sentences and numbers which the drill-master teacher demands from them are spouted forth, but there is little tolerance, and seemingly no time, for an original idea or an association to be spontaneously expressed. The conditions are not right for arousing and guiding curiosity, for setting up the connections in things recited to things experienced.

This method of teaching is not new, but will be remembered by many of you in this room as the kind you experienced. These were the conditions John Dewey criticised in 1933, when he wrote, "Children are hushed up when they ask questions; their exploring and investigating activities are inconvenient and hence treated as nuisances;

pupils are taught to memorize things so that merely one-track verbal associations are set up instead of varied and flexible connections with things themselves." That this philosophy of teaching was not limited to the primary schools, but extended even into colleges is witnessed by a comment of Robert M. Hutchins. Describing his role as a teacher at Yale, he put it this way: "We taught from textbooks, usually the most compact we could find, for we were reasonably sure that if the boys had memorized what was in the textbooks they would pass the examinations. We did not allow them to read anything except the textbook for fear of confusing their minds."

The Engelmann-Bereiter classes differ in one respect from the older traditional schools, in that the young pupils are not expected to sit impassively, with hands folded (an inactivity also condemned by John Dewey). While there is less mobility than is permitted in some of the better primary schools, these children are encouraged to recite (as a group) with simultaneous loud clapping of hands and other rhythmic movements.

In watching one of these classes, one is impressed with the seriousness of the work at hand. In fact, as in the old Protestant ethic tradition, the emphasis in learning is on work, not play, and on making everything count, as if time were short and needed to be conserved. When there are mistakes, they are disapproved of not only by strong words, but occasionally by slapping of the hands, as if to emphasize that one must feel guilty when he makes mistakes, and that errors are to be dealt with as if there has been misbehavior which is punishable.

The promoters and innovators of this kind of teaching do not consider themselves militaristic, although they admit that children must be pushed and pressed to learn and that learning must be recognized as something hard to do. It is not easy to determine the effects of this kind of teaching on children in the University of Illinois experimental program. Engelmann and Bereiter are pleased that their children are able to speak in sentences, speed up their achievement in arithmetic, reading and spelling, and in general have increased I.Q. levels. Professor J.McVicker Hunt, also of the University of Illinois, believes that the children have made gains in psycholinguistic ability as shown in one of their special tests.

Colleagues who disapprove of the Engelmann-Bereiter approach have found the children very often tense, frightened and responding automatically. Many feel that there will not be a carry-over into the later years of schooling because too much is learned by rote. There may even be a fear and distaste for school. In rebuttal, Engelmann and Bereiter label disparagingly the advocates of a more flexible and less rigid atmosphere for early learning as the "Old

Guard" or "the Establishment." Like so many Americans in the 19th and 20th centuries, Engelmann and Bereiter expect of education what was expected of religion, that it be practical and pay dividends.

Proponents as well as critics admit that nobody knows how effective the Engelmann and Bereiter methods will be in the long run, especially when the children are admitted to schools where there are many more children per teacher, little special attention paid and fewer rewards of any kind provided. The question remains whether children taught by these methods have really learned to think, to reason and to conceptualize, or merely to parrot unquestioningly whatever they are told by authoritarian teachers. No one denies that the program is rigid, seemingly efficient, rewarding to some, but probably punitive to too many others. Yet one is reminded of a character in Auden's The Age of Anxiety, of whom it was said that his knowledge "had lain oddly around in a corner of his mind like luggage left long ago in an emergency by some acquaintance and had never been reclaimed."

It is hard to estimate how many Departments of Education in other universities are emulating the methods of Engelmann and Bereiter. A superficial survey shows that their emphasis on structured programs of teaching, rote learning, and the specified use of play materials appeals to citizen groups who feel that most of our troubles as a nation, especially the adolescent rebellion, stem from the influence of overly permissive educators, the progressive education movement, and Dr. Spock. When these lay persons happen to be officials of government and of Boards of Education, they use their influence to foster more traditional programs, often favoring those newer techniques which use impersonal teaching devices, including conditioning apparatus and other hardware. The "hardware" seems synonymous with hard-headedness, in contrast to the known, highly personal role of the teacher which is considered "software."

Members of the University of Florida Department of Education, like Kagan at Harvard, believe that mothers of young children should become involved in their education very early, and in order to do this most effectively they should be taught how to play with their children. To accomplish this, mothers of even very young babies are taught in well baby clinics how to use toys so that their children will learn concepts of size, relationships and of color. This program is reminiscent of that in which Russian mothers are taught how to play with their children and to use toys recommended by the polyclinic staff. As in Russia, the University of Florida educators emphasize attention to small muscle movements, exercises and body massage as ways of producing kinesthetic stimulation and fostering mental development. Here again, the emphasis seems particularly on how to get the children to learn more, and develop various skills, but without fostering their creativity or individuality in learning.

In teaching the use of toys in such a didactic manner, there is resemblance to the methods of Madame Montessori. This Italian physician-educationist worked in Rome with slum children 3 to 7 years of age who were cared for in day care centers. Montessori invented educational toys which were used in didactic teaching of children in order to help them develop their intellects. She was also concerned with teaching discipline, and the cultivation of good habits of study. In contrast to some present day American educators, especially Engelmann and Bereiter, Montessori hoped that her way of teaching would cultivate independence and curiosity, as well as persistence in learning. The Montessori system never really got started in America during her lifetime, since it vied with the Dewey-Kilpatrick programs of "progressive education." However, in 1958, the Montesori movement again started here, first in Connecticut, then spreading widely across the country. Even in its beginning, unorthodoxy and deviation from the original methods were evident, but in the past 10 years these have increased so much that it is rare to find two Montessori schools in which the methods are applied identically. The revisionists have tended to favor modification of the use of the equipment, general flexibility in programming, and more free play.

Critics of the Montessori approach in our country tend to find it much more acceptable than the Engelmann-Bereiter system. They generally believe that there are no harmful effects in young children educated according to Montessori principles, that many children find pleasure in this kind of teaching, and that the acquisition of sensory-motor skills is enhanced.

What the long-term effects are, of this and of the other new techniques, remains unclear. Those researchers providing more stimulation to children have not demonstrated that sensory stimulation enhances the use and understanding of symbols, which are necessary for the development of a sense of meaning. Those investigators favoring the use of teaching machines, even Skinner, acknowledge that unless wisely used educational technology could destroy initiative and individuality, "making all men alike and not necessarily alike in nice ways." Barbara Biber speaks to this question when she says that "Any learning-teaching paradigm is incomplete unless it consciously deals with the processes of personality formation that are inevitably associated with a particular method for accomplishing its goals. Thus the method, through its effects on attitude and therefore on motivation, becomes a secondary determinant of how far the original learning goal will be realized."

How much influence have these research projects had on educational programs in our country? One cannot tell. It is safe to say that the majority of educators have not yet caught up, or caught on, to what is going on in child development and animal behavior research. (Maybe it

is just as well.) As was true of the progressive education movement, most of the educators never understood Dewey, or even read his papers. What was used, frequently was distorted. Changes in concepts of learning and of how to teach children are coming so fast that it is difficult for even the professionals to keep abreast. There has been a frantic pursuit of the new, leading to uncritical acceptance of fads. As mentioned before, Piaget's concepts are ever-changing. There is also much confusion about programmed instruction. Skinner is reported as saying his teaching machines are not being used properly and that the programming too often is done by inexperienced persons. To the surprise and disappointment of their manufacturers, sales of teaching hardware have been very disappointing.

Defining Our Educational Goals

A greater deficiency than lack of awareness of the new in theory and research, is the rather general absence of clear goals or educational purpose of teachers and educators who are responsible for leadership in training and in planning services. In much of the discussion of the appropriate goals of education, and especially of the importance of helping a child develop his intellectual potentials, we are still unclear as to the difference between intelligence and intellect, and whether our efforts should be directed to one or the other. In his book, Science and Criticism, the historian Herbert Muller of the University of Indiana comments sharply that the word intelligence "has already been brought into disrepute by psychologists with a rage to measure something before they have defined what it is they are measuring."

Emphasis too often has been on measuring cognitive development or other learning on the basis of whether the I.Q. scores are changed. This brings to mind the remarks of the famous psychologist Edward Thorndike, who some thirty years ago devised intelligence and learning measurements for children. "Intelligence is the thing that psychologists test when they test intelligence" said Thorndike. This ambiguity sharply exposes the horns of the dilemma. Although many of these new teching techniques seem to bring about significant increases in I.Q. scores, some do not show gains as measured by tests yet are recognized as providing other benefits, as when disadvantaged children learn skills they would not have without the benefit of such schooling. This discrepancy has led clinical psychologists to reappraise the standard tests of intelligence, and to attempt to design substitutes which take into consideration the cultural heritage and the deprivations of the tested child, and which detect gains in learning even more than changes in I.Q.

One well-known critic, Professor Martin Deutsch of the Institute of Developmental Studies in New York City, has been working with

socially deprived children. In a review of his developmental studies and in discussing the relevance of intelligence testing, he concludes with a timely warning to all educators when he says, "The current vogue in education places a great deal of faith in psychological testing results as measures of program success. This faith may be well placed, but it tends to overshadow another worthwhile source of evaluation--reports of individual teachers. No matter what test results indicate, the teachers still see children who are stimulated in the areas of curiosity and initiative. It is the teachers themselves who are responsible for much of the children's heightened curiosity and initiative, and it is precisely these two characteristics that the usual testing in schools does not measure."

It is my belief still that in education, as in all child care and rearing, we should be concerned with the "whole child," the total self, not just the development of certain mental characteristics or the learning of skills. The conception of the whole child need not be as generalized, vague or overflowing with inspirational platitudes as some people have made it. The whole child to many of us represents a composite organism, the physical, emotional and social self, who learns through a variety of processes, cognitive learning being only one important component, and one which also involved feelings and emotions. When we say we believe that attempts should be made to help children experience joy and happiness in learning, and in schooling, this does not mean protecting them artificially against the crises of life or from all experiences of fear, anxiety and unhappiness. When we say we want children to feel free to ask questions, to explore, to experiment, to be spontaneous, we are not advocating license in a classroom atmosphere which is unsupervised, or led by a teacher who is incompetent or irresponsible. We expect teachers to be informed about appropriate curricular materials, but equally to know how to incite the deep interest of children, by involving them through their skill at teaching, their relationship with pupils, without resorting to pedagogical tricks. We expect educational programs to help children find themselves as individuals--learners, thinkers, doers, persons with feelings, with increasing clarity as to their identities and appropriate roles in life. Such programs may be based on sound experimental studies of learning and teaching, and the results evaluated by rigorous methods, which go beyond the measurement of changes in I.Q.

Professor Muller puts it this way: "What is needed, under any name, is the view of the biological whole man, a view in which we can make out the full value of the rational, but also the necessity of the non-rational -- feeling, sentiment, desire. The activities of the higher motor centers, known as the exercise of reason, are the most advanced point in man's development, the finest means of adaptation; but they do not by themselves actually run man. They belong

to a nervous system, which in turn, is subordinate to the system of needs and purposes that is the whole organism."

It seems to me that, at the very least, our goal should be the enhancement of all those factors which inevitably interact and foster the appropriate development of all parts of a child as he moves from infancy to childhood, then to adolescence and to adulthood. This will include the environmental, emotional, social, psychological influences as well as the cognitive and all other elements involved in learning. As scientists of human behavior and development, above all we would like to avoid the myopia of fragmentation wherein understanding of the whole organism is obscured by focus on a part. So far we have not been persuaded that in themselves the planting of particularized pieces of knowledge essentially penetrate the learning mystique. The teacher who depends on a rote imparting of information very likely has not opened the door to learning through creating attitudes of thought, curiosity, imagination, conceptualization. He has more likely minimized learning in favor of vague skills or achivements, or helped children acquire a stock pile of knowledge but no philosophy of life.

It is admitted that children need to learn how to adapt to a rapidly changing world, but a speed-up in their learning, in skill proficiency, does not guarantee ability to cope with life at any tempo. Too frequently today the emphasis is on speed, on hastening learning. Children are denied time to reflect, to cogitate, to dream. I believe this denial hinders the development of the intellect, which must be distinguished from development of intelligence.

The historian Hofstadter of Columbia University has given much thought to the differences between intelligence and intellect, as he views with alarm the continued existence of anti-intellectualism in all spheres of American life. According to him, "Intelligence is an excellence of mind that is employed in a fairly narrow, immediate and predictable range. Intellect on the other hand is the critical, creative and contemplative side of mind. Whereas intelligence seeks to grasp, manipulate, re-order, adjust; intellect evaluates and looks for the meanings of situations as a whole. It implies a special sense of the ultimate value and the act of comprehension. Socrates struck its essence when he said that the unexamined life is not worth living."

By concentrating on intelligence and discouraging intellect, current education may lead to the unexamined life so deplored by Socrates. In point of fact, education today too readily looks askance on anything smacking of the intellectual, as opposed to the practical, down-to-earth utilitarian know-how of categorized knowledge. The thoughtful, contemplative individualized characteristics of learning are not cherished for themselves in education, where esteem for the "doer" has become a derogation of the "thinker."

The cult of anti-intellectualism has long been rampant here, even before Sputnik brought a realization of the consequences of such anti-intellectualism. While the egghead in this particular moment of history is being assiduously courted, it is more for his expertise in specifics, for his scientism or his political skill than for admiration of his other qualities. It is precisely those intangible and immeasurable other qualities which enable him to reach above the plateaus of specific expertise which are so coveted today. Without the ability to examine life, the individual is impoverished and society is deprived; it could be that without the ability and the will to examine life we may stop living.

In our work with young children, it is always in order to reassess and re-examine the goals we set ourselves. What goals are we striving for in education and child rearing, and what is the spirit of our times in regard to these goals? As defined by Max Lerner, are we for education that is an "uncritical embrace of the life goals of success, power and prestige, the slack acceptance of questionable means alongside a happy moralism?" Or shall we "instill a love of books, a hunger for experience, a critical attitude toward the prevailing idols of the tribe?" Are we for the teachers who "unlock the treasures of history and science, literature, and the arts with a key to whatever has been felt and created, which makes every educational system potentially revolutionary, and every good teacher by necessity an insurgent?" My personal hope is that our passion for mass education will be founded primarily on belief in the desirability of developing the mind, and on a pride in learning and culture for their own sakes, rather than on political or economic benefits; and having set that goal, that we will implement it by doing whatever is necessary, so that we may finally realize the kind of education we have idealized in words for over 200 years.

From my contact with Evangeline Burgess it seems to me that she stands out as one who was dedicated to such goals of teaching and education, and that she strived to "instill a love of learning and a hunger for experience" into the fabric of this college. Though the ideal formula for teaching children continues to elude us, nevertheless the memory of Evangeline Burgess would have us persevere in finding effective ways to help all children in their development, beginning with the early months and years of childhood. Above all we can achieve greater clarity and conviction about the purposes of education for children, the kinds of human beings we hope to develop, the attitudes we really cherish, and the kind of society in which we want to live. That is our obligation and responsibility to children, citizens of the future, and also to such dedicated educators who in the past have permitted us to join with them in fostering better ways in education.

EVANGELINE BURGESS
January 17, 1913 - April 17, 1965

Evangeline Brainard Burgess gained national recognition as a leader in the field of early childhood education. She was committed to the belief that early learning, during the first six years of a child's life, constitutes perhaps the most significant experience in the human life span, and she implemented this belief by working toward the provision of good nursery education programs available to all children.

Wide acceptance of this point of view has developed only very recently, as Head Start and other compensatory education programs have become a matter of national policy.

Evangeline's ambition at a young age was to be a nursery school teacher. After graduating from South Pasadena High School and attending the University of Redlands, she enrolled in Whittier College's Broadoaks School of Education then located at what is now Pacific Oaks' Pasadena campus. At Broadoaks, she studied with Dorothy Baruch, a pioneer as Evangeline was to become, in nursery and parent education, and later collaborated with her on the book, Parents and Children Go to School. She received her A.B. degree in 1935, married, directed a Southern California nursery school and later traveled to the midwest. She and her husband, Richard Burgess, returned to California with three young daughters in 1945. Evangeline became director of Pacific Oaks Children's School in 1949 and in 1954, Director, later President, of Pacific Oaks. From this position and through an active role in professional organizations and governmental advisory committee posts, she influenced the course of early childhood education in this country, enlarging its acceptance and design. She also emphasized the advantages of higher education for women, thinking back perhaps to the beginning of her own career when the opportunity to choose one's life work by women was not fully accepted, nor a college education thought to be the basis for examination of a modern woman's values.

She was an active member of National Education Association; Association for Childhood Education, International, for which she wrote Values in Early Childhood Education; National Association for the Education of Young Children; Southern California Association for Nursery Education; Delta Kappa Gamma; Altrusa; and Delta Phi Upsilon.

The Southern California Association for Nursery Education has established the Evangeline Burgess-SCANE Memorial Library Fund at Pacific Oaks Library. Dr. Milton J.E. Senn, pioneer in interdisciplinary child study, has delivered the first Evangeling Burgess Memorial Lecture. These are tangible reminders of Evangeline's great contribution to childhood education.

The intangibles are remembered by the countless parents, children, now grown, and students and teachers who knew Evangeline and shared her professional aims; and those who did not know her but for whom she helped pave the way to a career commitment--serving children and their families.

PACIFIC OAKS grew as an educational center to national stature under Evangeline Burgess' aegis. Founded in 1945 by seven Friends families, its purpose as College and Children's School is to apply and to contribute knowledge about human development and to foster conditions which promote the development of children as competent, confident and thoughtful individuals capable of making and contributing to a peaceful society.

The College offers the B.S. degree with majors in Child Development, Psychology and Sociology; and a cooperative master's degree program with Claremont Graduate School and Whittier College. Both upper division and graduate students learn theory combined with practical application and observation in the Children's School, in their interdisciplinary studies centering on human development. Since 1966, Pacific Oaks has also been a training center for Head Start teachers from the Southwest who attend intensive 8-week training courses at the Pasadena campus.

In addition, the Library with an outstanding collection of materials on early childhood education, the Research Department which carries out selected projects in Pacific Oaks' field of specialization; and the Community Services Division which acts as a resource center for public and private agencies, combine to make this young institution a leader in training men and women for professions which serve young children and their families.

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